Allotment Assessment and Evaluation Report for
New Mexico Standards and Guidelines for Public Land Health
Los Taoses (#873) – September 9, 2010

Permittee/Lessee		Authorization Number 3001413		
Livestock Use	Preference AUMs	Allotment 00873	Active 39	Suspended 0
	Period of Use / Kind of livestock	Allotment Los Taoses	Number/Kind 70 Cattle	Season of Use 7/15 – 7/31
	Percent Public Land	AUMs are authorized at 100% public land		
Allotment Profile	Physical Description	Allotment 873 is located approximately 13.5 miles west of Taos in Taos County, New Mexico. Los Taoses is two parcels of BLM lands on the south side of Cerros de los Taoses. The north parcel is a pinyon-juniper woodland with an understory of grass, forbs, and some shrubs located on the south slope of Cerros de los Taoses. The south parcel is relatively flat terrain and densely populated with big sagebrush Elevation ranges from 7100 to 7600 feet. Six soil types are identified within the allotment. These soils are: Fernando-Hernandez association, nearly level. The soil consists of loam and clay loams, with rooting depths over 60 inches. Parent materials of alluvium derived from mixed sources comprise this soil. Average annual precipitation ranges between 10 and 14 inches. Hazards for erosion are moderate. Vegetation is characterized by western wheat, galleta, blue grama, winter fat, fourwing saltbush and sagebrush. Hernandez-Petaca association, gently sloping. The soil consists of loams, with rooting depths over 60 inches. Parent materials of alluvium derived from mixed sources comprise this soil. Average annual precipitation ranges between 10 and 14 inches. Hazards for erosion are slight to moderate. Vegetation is characterized by western wheat, needle and thread, galleta, blue grama and sagebrush. Orejas-Montecito association, strongly sloping. The soil consists of loams, with rooting depths between 20 and over 60 inches. Parent materials of weathered basalt and eolian materials comprise this soil. Average annual precipitation ranges between 13 and 15 inches. Hazards for erosion are moderate. Vegetation is characterized by pinyon, juniper, sideoats grama, sagebrush muttongrass and blue grama. Petaca very stony loam, 1 to 15 percent slopes. This is a shallow, well drained, nearly level to rolling soil on uplands.		

		The parent material is derived from weathered basalt and mixed sediment. Average annual precipitation is 12 inches and effective rooting depth is 12 to 20 inches. Hazard of water erosion is moderate. Vegetation is characterized by big sagebrush, western wheatgrass, sideoats grama, fourwing saltbrush, and blue grama. Petaca-Silva association, gently sloping. The soil consists of loams, with rooting depths between 20 to over 60 inches. Parent materials of weathered basalt and eolian materials comprise this soil. Average annual precipitation ranges between 10 and 14 inches. Hazards for erosion are slight to moderate. Vegetation is characterized by western wheat, blue grama and sagebrush. Servilleta-Prieta complex, 1 to 5 percent slopes. These soils consist of clay loams, with rooting depths between 10 to 40 inches. Parent materials of mixed material derived from weathered basalt and eolian comprise these soils. Average annual precipitation ranges between 10 and 14 inches. Hazards for erosion are slight to moderate. Vegetation is characterized by blue grama, western wheat and sagebrush.
	Land Status Acreage	BLM: 960 State: 0 Private: 0
	Management Objectives	The allotment is under an 'Improve' ('I') management category. 'I' category allotments are managed in a manner to help the allotment achieve satisfactory ecological condition in accordance with the Allotment Management Plan.
	Key Forage Species	Blue grama, sideoats grama, muttongrass, needle and thread, galleta, western wheatgrass.
	Grazing System	Seasonal short duration in rotation with privately controlled lands
Current Conditions / Management	Actual Use	Actual use reports were not submitted for every year. Actual use was determined by the amount of AUMs billed for. Year / AUMs 2000: 0 2001: 0 2002: 39 2003: 0 2004: 39 2005: 0 2006: 39 2007: 0 2008: 0 2009: 39 2010: 0
	Utilization	Due to the lack of staff utilization studies have not been conducted. During the allotment visit it was noted that very little use has occurred.

<table>
<tr><td></td><td>Climate</td><td>The past water year (Oct. 1, 2009 – Sept. 30, 2010) the average temperature has been slightly below average (0 to 1 degrees Fahrenheit) and precipitation above average (0 to 3 inches). The winter was slightly wetter (1.5 to 3 inches) and was colder (3 to 4 degrees Fahrenheit). The spring was drier (0.75 to 1.5 inches) and was colder (1 to 2 degrees Fahrenheit). This should provide below average plant growth for cool season plants. The summer precipitation was below average (0 to 1.5 inches) and slightly warmer (1 to 2 degrees Fahrenheit) which should provide below normal growth for warm season plants.

Global climate change resulting from increasing atmospheric CO_2 levels may accelerate rates of plant extinction and result in shifts in ecosystem structure (species diversity) and function. We anticipate that our monitoring efforts will track vegetation shifts allowing for management modifications to address local range impacts resulting from global climate change.</td></tr>
<tr><td></td><td>Trend</td><td>In 2010 monitoring transects and photo points were placed in the allotment to establish vegetation trend. The full findings are kept in the allotment file at the Taos Field Office, but are summarized below.

<table>
<tr><td>Plot #1</td><td>2010</td></tr>
<tr><td>Ground Cover</td><td>(%)</td></tr>
<tr><td>Bare Ground</td><td>38</td></tr>
<tr><td>criptogams</td><td>0</td></tr>
<tr><td>gravel</td><td>12</td></tr>
<tr><td>rock</td><td>2</td></tr>
<tr><td>litter</td><td>34</td></tr>
<tr><td>BOGR (Blue Grama)</td><td>9</td></tr>
<tr><td>KRLA (Winterfat)</td><td>1</td></tr>
<tr><td>ELEL (Squirelltail)</td><td>3</td></tr>
<tr><td>OPPO (Pricklypear)</td><td>1</td></tr>
<tr><td>ARPU (Threeawn)</td><td>1</td></tr>
<tr><td>Species Composition</td><td>(%)</td></tr>
<tr><td>KRLA (Winterfat)</td><td>13</td></tr>
<tr><td>BOGR (Blue Grama)</td><td>45</td></tr>
<tr><td>ELEL (Squirelltail)</td><td>25</td></tr>
<tr><td>SAAU (Russian Thistle)</td><td>7</td></tr>
<tr><td>SPCO (Scalet Globemallow)</td><td>1</td></tr>
<tr><td>CHGR (Rabbitbrush)</td><td>1</td></tr>
<tr><td>OPPO (Pricklypear)</td><td>1</td></tr>
<tr><td>ARTR (Big Sagebrush)</td><td>3</td></tr>
<tr><td>PASM (Western Wheatgrass)</td><td>1</td></tr>
</table>
</td></tr>
</table>

		SPCR (Sand Dropseed) 1
	Riparian	There are no riparian areas within this allotment.
	Wildlife	Seasonal home ranges in the allotment include those for deer, elk, bear, bobcat, fox, coyote, small mammals and reptiles, bats, raptors, turkey vulture, songbirds, and a variety of insects. Some dietary overlap occurs between wildlife and livestock; however, best management practices would ensure that forage production within this area can support both wildlife and livestock on a sustained basis.
	Threatened and Endangered Species	It is determined that there are no federally listed threatened or endangered species likely to be found in the subject allotment. There is no designated critical habitat for any species listed by the USFWS within the allotment. Special status species that are likely to be found on the allotment (seasonally) include bald eagle and ferruginous hawk.
Findings / Rationale for the New Mexico Standards for Public Land Health		Two Rangeland Health Evaluation Matrixes were completed on September 9, 2010. This evaluation matrix is from Technical Reference 1734-6 "Interpreting Indicators of Rangeland Health." The actual matrix forms are available within the allotment file. Below is a summation of the information gathered by the on site evaluation. Within the Rangeland Health Attributes are three different categories of indicators. The categories include; Soil and Site Stability, Hydrologic Function and Biotic Integrity. The percent of indicator score was created by multiplying an assigned value for departure from site descriptions/reference areas by the number of indicators at the level. Departure scores are categorized as: none to slight = 5, slight to moderate = 4, moderate = 3, moderate to extreme = 2 and extreme = 1. For example, if all indicators under Soil/Site Stability were rated none to slight (best condition), the equation would be 5(score)*10indicators=50/50*100 = 100% similarity, or what is expected based on an Ecological Site Description. Plot 1 Soil and Site Stability Ten indicators were deemed None to Slight, zero were deemed Slight to Moderate, zero were deemed Moderate, zero were deemed Moderate to Extreme, and zero were deemed Extreme to Total. Rating: 100% Hydrologic Function Ten indicators were deemed None to Slight, zero were deemed Slight to Moderate, zero were deemed Moderate, zero were deemed Moderate to Extreme, and zero were deemed Extreme

		to Total. Rating: 100% Biotic Integrity Eight indicators were deemed None to Slight, one was deemed Slight to Moderate, zero were deemed Moderate, zero were deemed Moderate to Extreme, and zero were deemed Extreme to Total. Rating: 98% Overall Rating: 99% Plot 2 Soil and Site Stability Three indicators were deemed None to Slight, two were deemed Slight to Moderate, three was deemed Moderate, two were deemed Moderate to Extreme, and zero were deemed Extreme to Total. Rating: 72% Hydrologic Function Two indicators were deemed None to Slight, two were deemed Slight to Moderate, three were deemed Moderate, three were deemed Moderate to Extreme, and zero were deemed Extreme to Total. Rating: 66% Biotic Integrity Two indicators were deemed None to Slight, two were deemed Slight to Moderate, three were deemed Moderate, two were deemed Moderate to Extreme, and zero were deemed Extreme to Total. Rating: 69% Overall Rating: 69%
	Upland Standard	*Upland ecological sites are in productive and sustainable condition within the capability of the site. Upland soils are stabilized and exhibit infiltration and permeability rates that are appropriate for the soil type, climate, and landform. The kind, amount and/or pattern of vegetation provides protection on a given site to minimize erosion and assist in meeting Sate and Tribal water quality standards.* This allotment is not meeting the Upland Standard based on the above evaluation and information. The main concern is the south parcel (Plot 2). Soil stability is very low. Pedestalling is active and bare ground is very high. The soil has been degraded and lost because few herbaceous species are present in the understory. The north parcel (Plot 1) is the opposite of the south. There is a healthy understory with an abundance of many different grass, forb, and shrub species. Soil loss is

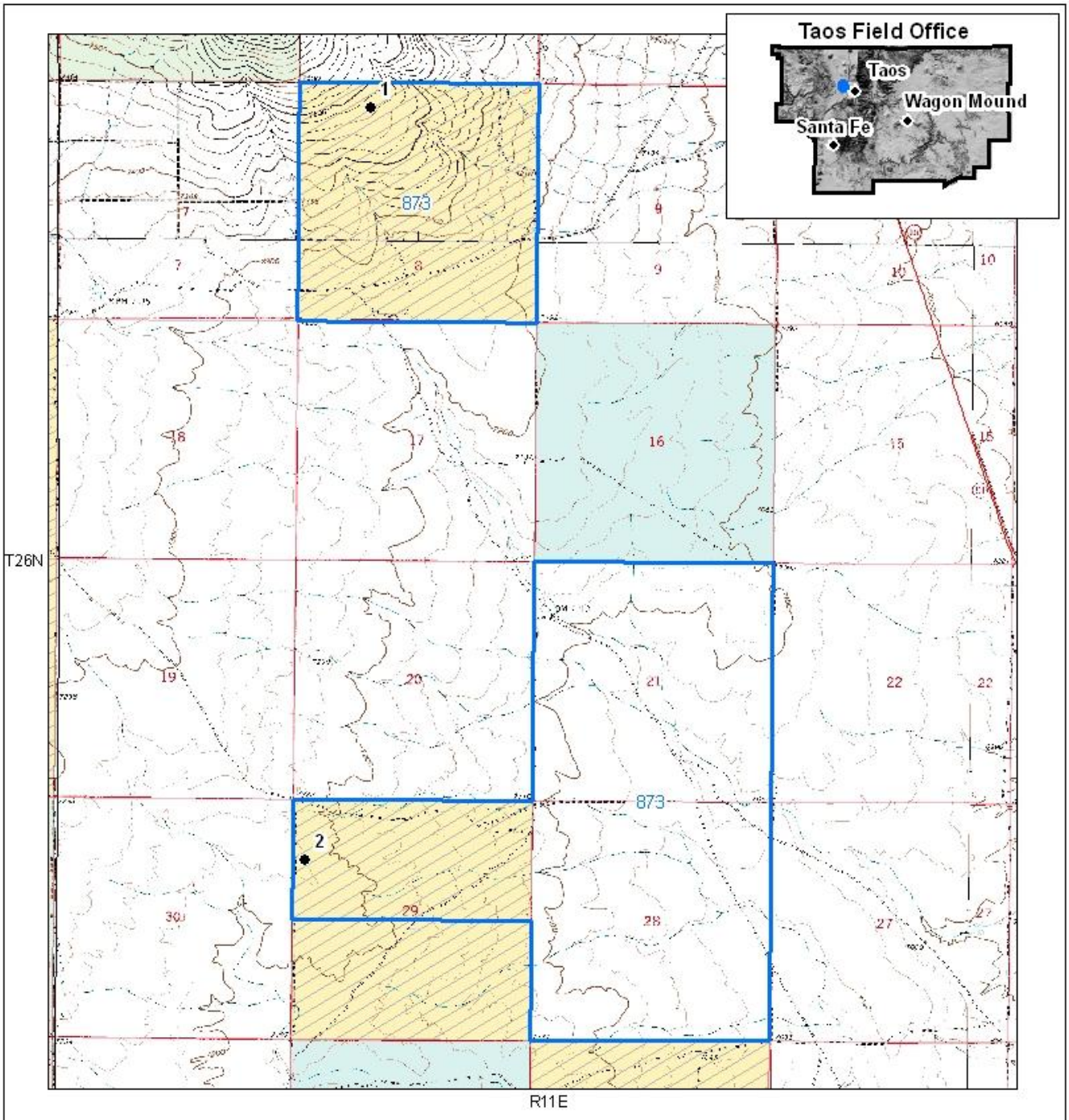
		minimal and bare ground low.
	Biotic Communities Standard	*Ecological processes such as hydrologic cycle, nutrient cycle, and energy flow support productive and diverse native biotic communities, including special status , threatened, and endangered species appropriate to site and species.* This allotment is not meeting the Biotic Communities Standard based on the above evaluation and information. Again, the main concern is the south parcel. Big sagebrush (Artemisia tridentata) has completely taken over the site allowing soil loss and disruption in the hydrologic cycle. Few herbaceous species are present to produce litter and annual production is low. The north parcel the biotic communities are properly functioning. Plants are healthy and with a mix of different species and classes. The pinyon-juniper areas are not dense and allow for a productive understory.
	Riparian Standard	*Riparian areas are in a productive, properly functioning and sustainable condition, within the capability of that site.* The Riparian Standard does not apply to this allotment. No riparian area or vegetation is located within the allotment boundaries.
Conclusion		The New Mexico Standards for public land health are not being met; therefore a Determination Document is warranted. Continued monitoring will help establish future trend. It is recommended that the south parcel receive no use until vegetation treatments can be performed to remove the sagebrush, promote soil stability, decrease the amount of bare ground, and improve infiltration. In its current state there is little forage available for livestock or wildlife. The north parcel is in excellent condition, functioning as desired, and meeting public land health standards. It is recommended that the grazing lease be renewed for another 10 years in accordance with the fore mentioned recommendations.

Consultation and Coordination

This Assessment and Evaluation Report has been sent or given to the affected permitee(s) / lessee(s), the interested publics and the following interdisciplinary team members for input and review:

Merril Dicks – Archeologist
Scott Draney – Department of Game and Fish
Greg Gustina – Fish Biologist
Pam Herrera-Olivas – Wildlife Biologist
Tami Torres – Outdoor Recreation Planner
Jacob Young – Rangeland Management Specialist
Paul Williams – Archeologist
Valerie Williams – Wildlife Biologist

This document was prepared by: Derek Trauntvein – Rangeland Management Specialist



Los Taoses (873)

0 0.15 0.3 0.6 0.9 1.2 Miles

Legend

- Monitoring Plots
- Allotment Boundary
- Bureau of Land Management
- Private
- State
- Forest Service

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Friday February 11, 2011

7.5' Topos: Cerro de los Taoses, Tres Orejas